

REMARKS

The present Amendment amends claims 1, 6 and 11 and leaves claims 2-5, 7-10 and 12-16 unchanged. Therefore, the present application has pending claims 1-16.

Claim 6 stands rejected under 35 USC §112, first paragraph as allegedly failing to comply with the enablement requirement. Particularly, the Examiner notes that claim 6 recites a second file system being included in the storage system yet the specification only enables a single file system in the storage system. Amendments were made to claim 6 to correct this minor error. The file server being referred to in claim 6 is the file server included in another storage system. Thus, the claims as now amended correspond to the disclosure of the present invention as set forth in the specification. Accordingly, reconsideration and withdrawal of the 35 USC §112, first paragraph rejection of claim 6 is respectfully requested.

Claims 1, 6, 11 and 16 stand rejected under 35 USC §102(e) as being anticipated by Srinivasan (U.S. Patent No. 6,823,336). This rejection is traversed for the following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 1, 6, 11 and 16 are not taught or suggested by Srinivasan whether taken individually or in combination with any of the other references of record. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Numerous arguments were presented distinguishing the features of the present invention from Srinivasan in the Remarks of the June 21, 2006

Preliminary Amendment, said Remarks being incorporated herein by reference.

Additional amendments were made to claims 1, 6, 11 and 16 as set forth herein so as to more clearly recite that according to the present invention the disk control unit, included in the storage system, receives data of a file that has been updated in another storage system and a history of file management information from the another disk system included in the another storage system through the communication link, without using another file server which is connected to the another disk system of the another storage system and stores the received data of a file and the history of file management information on the disk cache of the disk system of the storage system.

Further, amendments were made to the claims so as to more clearly recite that the file server of the storage system monitors the history of the file management information on the disk cache of the disk system of the storage system and updates the file management information in the file system cache of the main memory of the storage system in accordance with the update of the file performed in the another storage system, if a change in the history of the file management information on the disk cache of the disk system of the storage system has occurred.

Thus, according to the present invention as illustrated, for example, in Fig. 3 of the present application, particularly with regard to Steps S5-S7, the file server monitors the disk cache 36 so as to determine whether changes have occurred in the journal 46. If any changes have occurred as a result of the writing of data from the storage system A into the disk cache 36 of the

storage system B as per Step S4, then the user data 48 and journal log 49 of the file system cache 34 of the storage system B is updated.

The above described features of the present invention now more clearly recited in the claims are not taught or suggested by any of the references of record whether taken individually or in combination with each other. Particularly, the above described features of the present invention as now more clearly recited in the claims are not taught or suggested by Srinivasan.

Srinivasan simply teaches, for example, in Fig. 9 thereof that data written to a first storage 110 is stored in a delta volume 145 and is then written from the delta volume 145 to the delta volume 147 of the second storage system 113. Once the data is written to the delta volume 147 of the second storage system 113, it is then stored in the file system 142 of the second storage system 113. Srinivasan simply describes the above described processing as remote mirroring which can operate in synchronous or asynchronous modes. The Examiner's attention is directed to col. 15, lines 55-62 of Srinivasan.

However, as is quite clear from the above, at no point is there any teaching or suggestion in Srinivasan that the file system 142 of the second storage 113 monitors the cache included in a disk system so as to determine whether changes have occurred in the file management information stored therein as in the present invention. Further, there is no teaching or suggestion at any point in Srinivasan that if the file system 142 upon detecting that a change has occurred in file management information stored in a cache memory of a disk system, then the file management information stored in a

file system cache included in the file system 142 is updated according to the changes as in the present invention.

Thus, Srinivasan fails to teach or suggest that the disk control unit receives data of a file that has been updated in another storage system and a history of file management information from another disk system through the communication link, without using another file server which is connected to the another disk system of the another storage system, and stores the receives data of the file and the history of file management information on the disk cache of the disk system of the storage system as recited in the claims.

Further, Srinivasan fails to teach or suggest that the file server monitors the history of the file management information on the disk cache of the disk system of the storage system and updates the file management information the file system cache of the main memory of the storage system in accordance with the update of the file performed in the another storage system if a change in the history of the file management information on the disk cache of the disk system of the storage has occurred as recited in the claims.

Therefore, Srinivasan fails to teach or suggest the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 USC §102(e) rejection of claims 1, 6, 11 and 16 as being anticipated by Srinivasan is respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the reference utilized in the rejection of claims 1, 6, 11 and 16.

Applicants acknowledge the Examiner's indication in the Office Action that claims 2-5, 7-10 and 12-15 are allowed.

In view of the foregoing amendments and remarks, applicants submit that claims 1-16 are in condition for allowance. Accordingly, early allowance of claims 1-16 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (TMI-5151).

Respectfully submitted,

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